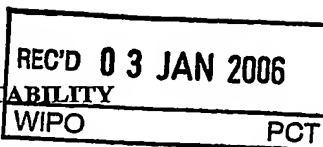# PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference USYS-014-006	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/US04/08496	International filing date *(day/month/year)* 19 March 2004 (19.03.2004)	Priority date *(day/month/year)* 19 March 2003 (19.03.2003)

International Patent Classification (IPC) or national classification and IPC

IPC(7): G06F 15/173 and US Cl.: 709/224

Applicant

UNISYS CORPORATION

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of ___ sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

    a. ☒ *(sent to the applicant and to the International Bureau)* a total of _3_ sheets, as follows:

    ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

    ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

    b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____ , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

    ☒ Box No. I   Basis of the report

    ☐ Box No. II   Priority

    ☐ Box No. III   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

    ☐ Box No. IV   Lack of unity of invention

    ☒ Box No. V   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

    ☐ Box No. VI   Certain documents cited

    ☐ Box No. VII   Certain defects in the international application

    ☐ Box No. VIII   Certain observations on the international application

Date of submission of the demand 12 October 2004 (12.10.2004)	Date of completion of this report 13 December 2005 (13.12.2005)

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Form PCT/IPEA/409 (cover sheet)(April 2005)

Box No. I   Basis of the report

1. With regard to the **language**, this report is based on:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into <u>English</u>, which is the language of a translation furnished for the purposes of:

      ☐ international search (under Rules 12.3 and 23.1(b))

      ☐ publication of the international application (under Rule 12.4(a))

      ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

   ☐ the international application as originally filed/furnished

   ☐ the description:
      pages <u>NONE</u> as originally filed/furnished
      pages* <u>NONE</u> received by this Authority on _____
      pages* <u>NONE</u> received by this Authority on _____

   ☒ the claims:
      pages <u>31-33</u> as originally filed/furnished
      pages* <u>NONE</u> as amended (together with any statement) under Article 19
      pages* <u>31-33</u> received by this Authority on <u>28 June 2005 (28.06.2005)</u>
      pages* <u>NONE</u> received by this Authority on _____

   ☐ the drawings:
      pages <u>NONE</u> as originally filed/furnished
      pages* <u>NONE</u> received by this Authority on _____
      pages* <u>NONE</u> received by this Authority on _____

   ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

      ☐ the description, pages _____
      ☐ the claims, Nos. _____
      ☐ the drawings, sheets/figs _____
      ☐ the sequence listing *(specify)*: _____
      ☐ any table(s) related to the sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

      ☐ the description, pages _____
      ☐ the claims, Nos. _____
      ☐ the drawings, sheets/figs _____
      ☐ the sequence listing *(specify)*: _____
      ☐ any table(s) related to the sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

Form PCT/IPEA/409 (Box No. I) (April 2005)

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 10-15, 22-27	YES
	Claims 1-9, 16-21	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-27	NO
Industrial Applicability (IA)	Claims 1-27	YES
	Claims NONE	NO

2. Citations and Explanations (Rule 70.7)

Claims 1-9 and 16-21, lack novelty under PCT Article 33(2) as being anticipated by Hofmann et al. Hofmann teaches the invention as claimed including a method and system for sending agent to collect device's characteristic for use the same. Hofmann further teaches the agent could be a set of software codes, instructions, scripts, that has been sent from a second device or embedded in the device itself. Further, Hofmann discloses the characteristic collected from the device includes but does not limit to, Hardware, resource configuration, including user information (Hofmann at abstract, figure 1-7, and column 1, line 55-column 10, line 50). Hofmann further discloses displaying at least one difference between the first data set and a second data set and comparing two sets of information to determine if a service available on the first device is not available on the second device (column 3, lines 21-34; column 6, lines 38-46; column 7, lines 4-17 and 38-51).

Claims 10-15 and 22-26 lack an inventive step under PCT Article 33(3) as being obvious over Hofmann et al (referred to as "Hofmann" hereinafter). Although Hofmann does not explicitly discuss specific details and minor difference in away that one may apply the inventive concept to a specific application as recited, for instance, in claims 21 and 27. However, it would have been obvious to one of ordinary skill in the art that was an obvious variation of implementing the inventive concept. In other words, it is a matter of desirable to apply Hofmann's idea with any other types of application including specific database application.

Claims 1-9 and 16-21, lack novelty under PCT Article 33(2) as being anticipated by Hodges et al (referred to as "Hodges" hereinafter). Hodges teaches similar inventive concept as claimed. Hodges discloses a software agent is pushed to client's device to detect virus pattern, detecting virus version and performing update the virus. Hodges too, teach the same inventive concept for another application (abstract, figures 4, 7, 11-12, column 1-2, 7. 12-13). Hodges further discloses displaying at least one difference between the first data set and a second data set and comparing two sets of information to determine if a service available on the first device is not available on the second device (column 7).

Claims 1-9 and 16-21, lack novelty under PCT Article 33(2) as being anticipated by Caswell et al (referred to as "Caswell" hereinafter). Caswell teaches similar inventive concept as claimed. Caswell discloses utilizing a discovery template for collecting network services data (abstract, figures 9-12, column 8-column 30). Caswell further discloses displaying at least one difference between the first data set and a second data set and comparing two sets of information to determine if a service available on the first device is not available on the second device (column 1, lines 55-66; column 17, lines 11-19).

Claims 1-27 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.
----------------- NEW CITATIONS -----------------

What is Claimed:

1. A method for consolidating computing devices, comprising:

sending a discovery agent over a network connection to at least one computing device;

receiving a first data set from said discovery agent indicative of characteristics of the at least one computing device; and

displaying at least one difference between the first data set and a second data set whereby a computing device consolidation candidate can be identified.

2. The method as recited in claim 1 wherein the second data set is from a computing device other than the computing device that was the source of the first data set.

3. The method as recited in claim 1 wherein the second data set is from the same computing device that was the source of the first data set but from a different time.

4. The method as recited in claim 2 wherein the at least one computing device is a server computer among a plurality of server computers.

5. The method as recited in claim 2 wherein the data set comprises information indicative of at least one application resident on the at least one computing device.

6. The method as recited in claim 2 wherein the data set comprises information indicative of at least one process executing on the at least one computing device.

7. The method as recited in claim 5 wherein the act of displaying at least one difference between the first and second data set comprises displaying an indication of a difference in the at least one application program in both the first data set and the second data set.

8. The method as recited in claim 5 comprising installing a version of the at least one application on a second computing device.

9. The method as recited in claim 8 comprising removing the at least one application from the at least one computing device.

10. The method of claim 6 comprising installing a version of the at least one process on a second computer.

11. The method as recited in claim 1 wherein the data set comprises information indicative of at least one database.

REPLACEMENT SHEET

AMENDED SHEET 31

12. The method as recited in claim 11 wherein the information indicative of the at least one database comprises column table information for tables in the at least one database.

13. The method as recited in claim 12 comprising populating a database on a second computer with at least a portion of the table information from the at least one database.

14. The method as recited in claim 1 wherein the act of sending the discovery agent to the at least one computing device comprises sending a remote procedure to the at least one computing device and remotely executing the remote procedure.

15. The method as recited in claim 14 comprising receiving the at least one data set via named pipes.

16. A method of consolidating services performed on a first and second computing device to a second computing device, comprising:

sending a discovery agent to the first computing device to determine a plurality of services provided by the first computing device;

receiving a first set of information indicative of the plurality of services provided by the first computing devices; and

comparing the first set of information to a second set of information indicative of a plurality of services performed by a second computing device to determine at least one service provided by the first computing device that is not available on the second computing device such that the at least oe service is indicative of a service to be added to the second computingdevice in a consolidation.

17. The method as recited in claim 16 comprising changing the services performed by the second computing device to include the at least one service.

18. The method as recited in claim 16 wherein the discovery agent comprises computer executable instructions for determining the system characteristics on the first computing device.

19. The method as recited in claim 18 wherein the system characteristics comprise at least one of: the number of processors, available processors, processor level, devices, disk drive characteristics, disk drive capacity, system name, page size, operating system version, operating system build, and network connectivity.

REPLACEMENT SHEET

AMENDED SHEET

20. The method as recited in claim 16 wherein the discovery agent comprises computer executable instructions for determining the executable process characteristics on the first computing device.

21. The method as recited in claim 20 wherein the process characteristics comprise at least one of: CPU utilization, memory utilization, active processes, active process dependencies, processor usage, memory usage, process creation time, process ID, process owner, process handles, process version, dependency version, process timestamp, process description, and dependency description.

22. The method as recited in claim 16 where the agent is executed by way of a remote procedure call.

23. The method as recited in claim 16 wherein the agent communicates the data set by way of named pipes.

24. The method as recited in claim 17 wherein the services comprise an application service provided by the first computing device.

25. The method as recited in claim 17 wherein the service is a database service.

26. The method as recited in claim 16 wherein the discovery agent comprises computer executable instructions for determining the database characteristics on the first computing device.

27. The method as recited in claim 26 wherein the database characteristics comprise at least one of: roles, users, aliases, defaults, rules, functions, user defined datatypes, user messages, tables, views, indexes, extended procedures, stored procedures, and triggers.